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OBITUARY.

Professor Henry George Plimmer, M.R.C.S., F.R.S., etc.
President R.M.S. 1911-12.

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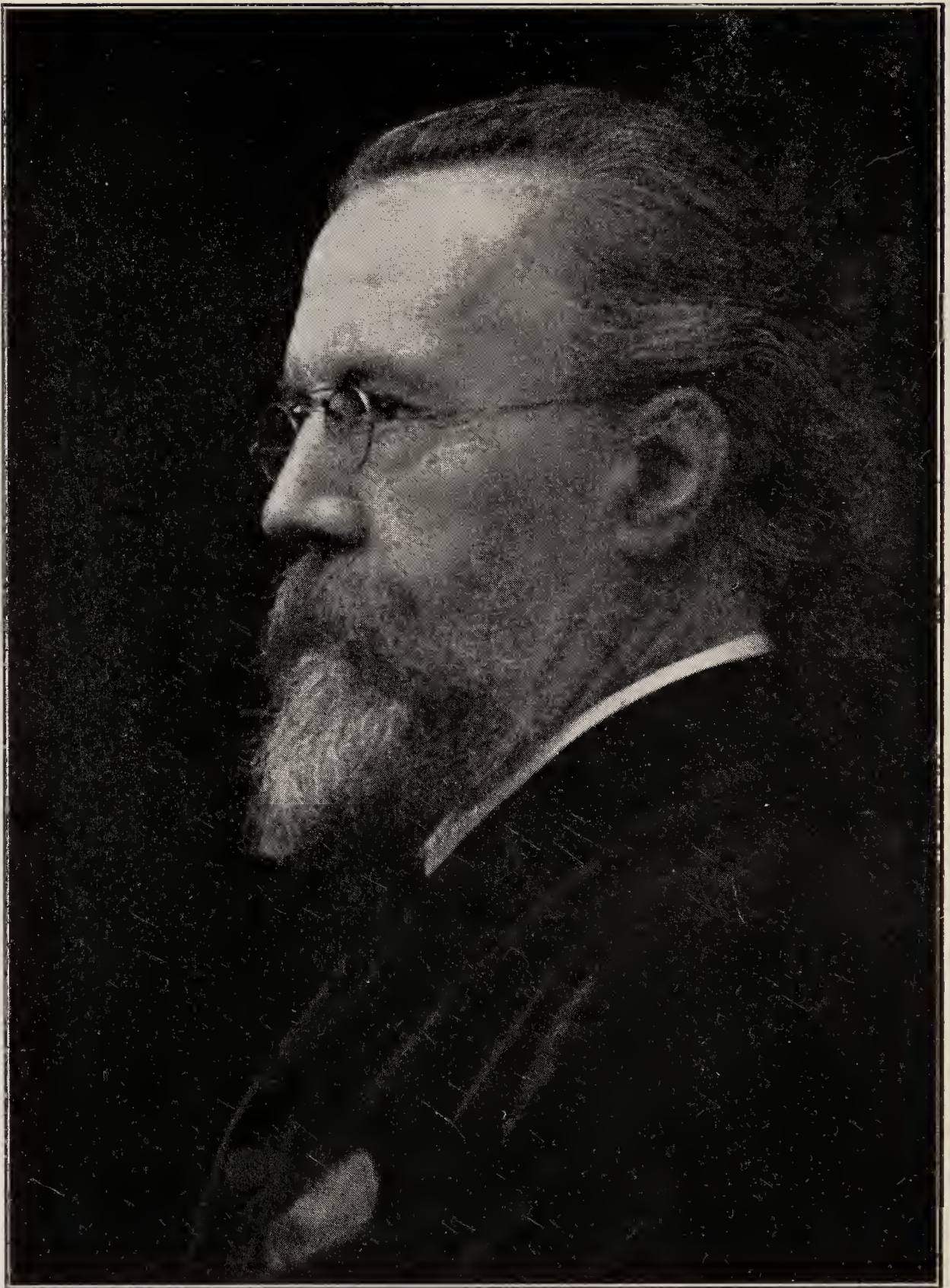
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W. G. Hammer

OBITUARY.

PROFESSOR HENRY GEORGE PLIMMER, M.R.C.S., F.R.S., etc.*

[President R.M.S., 1911-12.]

I.—LIFE.

HENRY GEORGE PLIMMER was born in Melksham, Wiltshire, on January 29, 1856. As a young child he suffered from ophthalmia, and practically lost the sight of his right eye thereby. It is ironically curious that ever since he began medicine he used microscopes more than any other instrument.

His father, Dr. George Plimmer, though Melksham is a small town, had a good practice for the country. He was fond of hunting and shooting, indeed of sport of all kinds, and was a well-known figure in the county. George Plimmer had been previously married, and had by his former wife one daughter, who had great musical talent. Henry George's mother and her family were not musical, so that his talent must have come from his father, although the latter often remarked that "music was only fit for women and fools." This is a curious anomaly—the father, with his skill in sport and contempt for music: the son, with no interest in sport and with passion for music.

His father died in 1865. Henry George records that he had no really distinct memory of his father, although he was nine years old at the time of his death, and attributes this to the fact that he was at boarding-school from the age of six, at Devizes. After his father's death it was decided to send him to Shaw House School, which had a local reputation, and was about a mile from Melksham. He seems to have taken every prize at this school except those for conduct and Scripture. He learned very little, but remembered some mathematics, for which he was grateful.

In September, 1867, his mother married John Kerslake, of Bath. He died the following year, and she left Bath early in 1870, and took a tiny house in Ironbridge, Shropshire. Young Plimmer left school in June, 1870, and joined his mother at Ironbridge. About a year later he became engaged as a clerk in the Coalbrookdale Co., at a salary beginning at 20*l.* a year. He soon got on, and was a favourite of the general manager, who chose him as his private secretary during the absence of his own secretary in America.

* Professor Plimmer has fortunately left an autobiography in which he set down details of his life for the purpose of any biography or fair statement of his work. It was mostly written in the garden of his friend Goetze, during the summer of 1917. It would seem that he had a presentiment of the fatal illness to which he succumbed in less than a year afterwards.

Knowing that he could do better things than clerking, Plimmer wrote in 1877 to Dr. J. H. Galton, who had years before been his father's assistant, asking how one began medicine and whether a man could get qualified without money. His whole capital was 400*l.* from his father. Dr. Galton replied that an assistant who had been with him for four years had just qualified and was leaving, and would he like to come and do the same. Feeling that here was his chance, he left his occupation at the Coalbrookdale Co. and went to Dr. Galton on April 2, 1878, at a salary of 50*l.* a year and board. He lived with Dr. Galton at Norwood, and had at first to do the dispensing and book-keeping. He gradually got on to helping in the poor part of the practice, which was large, of Galton and his partner, Sidney Turner. He became in fact "an unqualified assistant."* He entered Guy's Hospital as a perpetual student in the following October, the full fee being paid out of his small capital. His mother came to Norwood in 1880, so he left Galton's house and lived with his mother.

He was Prosector to the Royal College of Surgeons in 1882, became L.S.A. in October of the same year, and M.R.C.S. in January, 1883. The work at Norwood had been very hard and it was impossible for him to do more than just qualify. He did practically the whole of the parish and dispensing work, and frequently went two or three times a day backwards and forwards to Guy's Hospital, as well as being up at night two and three times a week attending midwifery cases. He did not regret these hard years, for he saw and did as much before he was qualified as many men do in ten years after. His interest in pathology arose from his association with Dr. (Sir) Samuel Wilks. He did not however hold any resident appointment. About 1883 he became intimately acquainted with Alfred Aders, of Manchester, and his wife and family, who were living at Norwood. After the death of Alfred Aders he married his widow, Helena, in 1887. His domestic life with this lady, who survives him, was ideally happy. He had previously been made a partner, in 1883, and the firm became Sidney Turner, Galton and Plimmer. In 1889 he moved from Norwood to Sydenham.

In 1892 he retired from general practice so as to devote himself to bacteriology and research, which he began with Professor Crookshank at King's College. In October of this year he described those inclusions in cancer cells subsequently called "Plimmer's bodies," and became acquainted shortly afterwards with the late Sir Armand Ruffer, who was working at the same subject. At Ruffer's suggestion they went to work together at the laboratories of the Royal College of Surgeons. They worked together there and later at the British Institute of Preventive Medicine, whither they had gone on its establishment in 1893, until illness compelled Ruffer to resign. He became Pathologist to the Cancer Hospital in 1894, where he further studied the various cell inclusions. He was appointed Bacteriologist and Lecturer on Bacteriology at St. Mary's Hospital in 1895, and succeeded Silcock, through whose efforts

* The unqualified assistant's post was at that time a recognized method of entering the medical profession.

the appointment was mainly made, as Pathologist and Lecturer on Pathology in 1899. His mother, to whom he was devotedly attached, and by whose side he was afterwards himself buried, died in 1896. In memory of her he founded the Eliza Kerslake prize at St. Mary's Hospital. After his mother's death he moved from Sydenham to St. John's Wood.

In 1902 Sir John, then Doctor, Rose Bradford asked him to take charge of the cancer laboratories at the Lister Institute which had just been started. He resigned his post at St. Mary's Hospital, and later he resigned his post as Director of the Pathological Department at the Cancer Hospital in order to have more time for this work.

From 1898 he had been working at trypanosomes partly alone and partly with Bradford, and in 1906 he undertook the research work on the subject of trypanosomiasis, which was organized and directed by the Tropical Diseases Committee of the Royal Society, and at the same time he was made a member of that committee.

He became Pathologist to the Zoological Society in 1907, a post from which he resigned in 1917.

His contributions to science were at last recognized in 1910, when he was elected a Fellow of the Royal Society. It was the only honour he ever desired, and its attainment left him quite free of desires in that direction. In July, 1913, he was elected a member of the Royal Society Club, of which he was a Treasurer for the years 1914-17. He was offered and accepted the Professorship of Comparative Pathology at the Imperial College of Science and Technology in 1915, was elected a member of the War Office Tetanus Committee in 1916, and later of the Trench Fever Committee. He was actively engaged with the work of his Professorship and with the work of the War Office Committees until a few weeks before his death, being largely concerned in the recent discoveries relating to trench fever. During part of this time he was suffering from that illness of which eventually he died. His death took place on June 22, 1918, at Coombe Bank, Sevenoaks, the residence of his friend, Robert Mond, J.P. Robert Mond, and more especially Mrs. Mond, his mother, were amongst his most intimate friends, and Plimmer would have been the first to eulogize the kindness and hospitality they offered not only during the days of his last illness, but throughout the period of their close friendship.

Plimmer was a Fellow of numerous scientific and medical societies. The first society of which he became a member was the Royal Microscopical, in 1883, soon after he was qualified. He always took a keen interest in the work of this Society, and on several occasions he gave demonstrations of his microscopical preparations. He also showed his preparations at the meetings of other societies. The specimens were justly admired, for he possessed a wonderful microscopical technique and was always making efforts to improve his methods. He never wearied showing his specimens or other technical details to his friends and colleagues; evenings were often spent alone and with his friends in the study of critical illumination and in discussions of technique.

He was elected to the Council of this Society in 1883, and was President in 1911-1912.

In 1887 he was elected to the Sydenham District Medical Society; became President in 1894, and Honorary Member in 1896.

He was a member of the Medical Research Club from 1894 to 1911; his resignation was due to the fact that he could not attend the meetings during the time that he was President of the Royal Microscopical Society.

He was a member of the Physiological Society from 1894 to 1913, and also of the Pathological Society.

The Linnean Society elected him a Fellow in 1890, and appointed him to the Council in 1917.

His other Societies were:—The Royal Medical and Chirurgical and Royal Society of Medicine (1901); The Royal Institution (1902), of which he was Visitor in 1914–16; Association of Economic Biologists (1917), of which he was a member of the Council from 1917.

He was the only English member of the Deutsche Komité für Krebsforschung, and was also a member of the Deutsche Pathologische Gesellschaft. He knew many of the foreign Bacteriologists and Pathologists intimately, and was welcomed during his many visits to their laboratories on the Continent. His work was as well known to his foreign colleagues as it was to those at home.

II.—SCIENTIFIC, ARTISTIC AND LITERARY WORKS.

During his partnership with Sydney Turner and Galton, Plimmer performed a great deal of surgery, and would undoubtedly have attained the position of a great surgeon if he had specialized in that direction. Amongst his surgical cases must be mentioned: (1) A case of Hysterectomy; (2) a case of Ectopic Gestation. These were remarkable operations carried out for the first time in this country, and described in the *Lancet* of 1883. Another early publication was on "Quinsy and Rheumatism," published in the *British Medical Journal* of 1886. Even in his busy days of practice he was continually occupied with histological preparations. The specimens demonstrated perfectly the exact structure of each organ. This was the beginning of the histological skill of his later years. An article dealing with the histology of the cell, protoplasm, etc., was written for the first edition of Hazell's "Encyclopædia."

He was particularly interested in the histology of cancer; his first paper dealing with the subject appeared in 1892, entitled, "Note on the Parasitic Protozoa lately found in Cancer," in the *British Medical Journal*. Herein he described the inclusions called Plimmer's bodies. At the same time he devised a technique which differentiated these cells from the known degenerations. This was followed by two papers jointly with Armand Ruffer, "Further Researches on some Parasitic Protozoa found in Cancerous Tumours," in the *Journal of Pathology and Bacteriology* in 1893. Together they published "Sur le mode de reproduction des parasites de Cancer" in *Comptes Rendus de la Société de Biologie* and the *Comptes Rendus des Académies de Science*. In 1894 there was a criticism entitled "The Rhopalocephalus Carcinomatous," published in the *Journal of Pathology and Bacteriology*.

While working with Armand Ruffer at the British Institute of Preventive Medicine he was concerned chiefly with bacteriology. For several years their main work was on diphtheria, some of the early samples of diphtheria anti-toxin being produced by them. In the autumn of 1895, together with Blaxall,

he gave a magnificent demonstration of nearly all the known bacteria at the meeting of the British Medical Association at Bristol. For those days it was really a grand show.

Though continually occupied with the problem of cancer, very few papers were published on the subject, but several reviews were written, namely, "On the Microscopical Diagnosis of Benign and Malignant Growths of the Cervix Uteri" in the *British Gynæcological Journal*, 1895; "Ætiology and Histology of Cancer" in the *Practitioner*, 1899. In 1898 he wrote "A Critical Summary of Ehrlich's Recent Work on Toxins and Anti-toxins" in the *Journal of Pathology and Bacteriology*.

In 1899, whilst at St. Mary's Hospital, he isolated a yeast from a cancer which was ulcerating, then from others. They showed great similarity to some of the cell inclusions, and the fact that they caused tumours in animals lead to the hope that here was the long-looked-for cause of cancer. It was a disappointment, as although they were found in several cancers, they did not produce genuine cancers in animals, and were no doubt accidental infections. Their association with cancer; as shown by his work and that of Sonfelice, Roncali and others, was interesting. These results were published in the *Proceedings of the Royal Society* under the title "Preliminary Note upon certain Organisms Isolated from Cancer and their Pathogenic Effects upon Animals." There was also an article in *Nature*, "Pathogenic Organisms of Cancer," and a short paper in the *Centralblatt für Bakteriologie* on the same subject.

A paper, "The Parasitic Theory of Cancer," appeared in the *British Medical Journal* of 1903. Plimmer always adhered to the parasitic theory. He was one of the first to try the effect of radium bromide on cancer, after having been on a special visit to Vienna to see the results of the treatment. His experience was published in the *Lancet* of 1904.

From 1899 until his death in 1918 his attention was given to blood-parasites, and he published numerous papers on Trypanosomata. The following is a list of the papers:—(With J. R. Bradford): "Preliminary Note on the Morphology and Distribution of the Organism found in the Tse-tse Fly Disease," *Proc. Roy. Soc.* 1899. "Ueber die Morphologie und Verbreitung der Tse-tse gefundenen Parasiten," *Centralblatt f. Bakt.*, 1899. "The Organism of the Tse-tse Fly Disease," *Nature*, 1899. "Organisms Infesting the Blood of Animals suffering from Tse-tse Fly Disease," *Nature*, 1902. (With J. R. Bradford): "The Trypanosoma Brucei," *Quart. Jour. Micr. Science*, 1902. "Note on the Effect produced on Rats by the Trypanosomes of Gambia Fever and of Sleeping Sickness," *Proc. Roy. Soc.*, 1905. "Further Observations on the Effects produced on Rats by the Trypanosome of Gambia Fever and of Sleeping Sickness," *Proc. Roy. Soc.*, 1907. (With J. D. Thomson): "A Preliminary Summary of the Results of the Experimental Treatment of Trypanosomiasis," *Proc. Roy. Soc.*, 1907. "Experimental Treatment of Trypanosomiasis," *Nature*, 1907. "Comparative Effects of the Trypanosomata of Gambia Fever and of Sleeping Sickness," *Nature*, 1907. "Abstract of Work on the Experimental Treatment of Trypanosomiasis carried out under a Sub-Committee of the Royal Society," *Govt. Blue Book*, 1907. (With J. D. Thomson): "Further Results on the Experimental Treatment of Trypanosomiasis," *Proc. Roy. Soc.*, 1908; reprinted in the *Reports of the Sleeping Sickness Commission of the Royal Society*, 1908. (With H. C. Bateman): "Further Results on the Experimental Treatment of Trypanosomiasis," *Proc. Roy. Soc.*, 1908; reprinted in the *Reports of the Sleeping Sickness Commission of the Royal Society*, 1908.

"Abstracts of further Results of Experimental Treatment of Trypanosomiasis carried out under a Sub-Committee of the Royal Society," Govt. Blue Book, 1908. "Experimental Treatment of Trypanosomiasis," *Nature*, 1908. "Ergebnisse von Versuchen Trypanosomiasis in Ratten zu behandeln," *Centr. f. Bakt.*, 1908. "Weitere Ergebnisse von Versuchen Trypanosomiasis in Ratten zu behandeln," *Centr. f. Bakt.*, 1908. "Weitere Ergebnisse von Versuchen Trypanosomiasis in Ratten zu behandeln," *Centr. f. Bakt.*, 1909. (With W. B. Fry): "Further Results on the Experimental Treatment of Trypanosomiasis," *Proc. Roy. Soc.* 1909. (With W. B. Fry and H. S. Ranken): "Further Results on the Experimental Treatment of Trypanosomiasis," *Proc. Roy. Soc.*, 1910. "Experimental Treatment of Trypanosomiasis," *Nature*, 1910. "Note on Methods," Appendix to paper by W. B. Fry and H. S. Ranken on "Granules," *Proc. Roy. Soc.*, 1913. "Blood Parasites," *Proc. Roy. Inst.*, translated into French in *Revue Scientifique*, 1913. "Blood Parasites," *Nature*, 1913. "Note on the Genus *Toxoplasma*, with a Description of Three new Species," *Proc. Roy. Soc.*, 1916. "On the Blood Parasites found in Animals in the Zoological Gardens during the four years 1908-1911," *Proc. Zool. Soc.*, 1912.

This long series of papers on blood-parasites shows that a great deal of the work was devoted to combating sleeping-sickness. Plimmer was the first to use antimony compounds as a means of killing the parasite, after he had tried numerous arsenical preparations and had found them to be uncertain in their action and frequently producing serious after-effects. This was not noticeable in the case of antimony salts, but occasionally the use of antimony, like arsenic, produced parasites immune to the drugs. It was remarkable to see the effects of doses of sodium or lithium-antimonyl tartrate upon the infected rats. The moribund rat became lively a few minutes after the injection of the drug; after several doses its coat and general condition could not have been more healthy. The appearance of the blood was also most striking; before the injection parasites swarmed; five minutes later only a few parasites were seen; fifteen minutes later no parasites were visible. There was no doubt that the treatment removed the parasites from the blood and the rats were cured. Parasites, however, wander into the cerebro-spinal fluid, and these are not killed by the drug. Some of these enter the blood after the antimony has been excreted, and they can be killed by a second dose. A third dose will kill another invasion from the cerebro-spinal fluid. The antimony-salt is only a real cure in those cases in which the cerebro-spinal fluid is not infected. In these cases it was found that injections of finely-divided metallic antimony into the muscular tissue produced a cure. The best results were ultimately obtained by injecting a suspension of metallic antimony directly into the bloodstream. Horses, goats, rats, and other animals have been cured of the disease. There is a private record of the successful treatment of a few human patients suffering from sleeping-sickness. They were living many years after the injection of antimony, and some had been treated unsuccessfully with arsenic. The curative treatment of sleeping-sickness with antimony was carried out on a large scale in Africa by his late colleagues, Major W. B. Fry, R.A.M.C., and Major H. S. Ranken, V.C., R.A.M.C. Major Fry has also published the results of the successful treatment of yaws with antimony. Plimmer and Fry had previously treated cases of syphilis with this drug with most excellent results. It is a pity that there was no opportunity for further studying the cure of syphilis with antimony. This work of Plimmer and Fry seems to have escaped the notice of other workers.

Plimmer's other papers consist mainly of yearly reports on the deaths in the

Zoological Gardens. For four years, 1908–1911, an examination of the blood of the animals was made for parasites, and in 1911 he made a report on the examination of 500 rats caught in the Zoological Gardens. A quarantine house was instituted at his suggestion and the animals in it were under his charge, as well as many other important items in connexion with the health and care of the animals.

Plimmer was an extraordinarily fine musician. In addition to an immense knowledge of music, gained by his own study and by attending musical festivals, he was a wonderful pianist. At the time he left school in 1870 he had no other inclination than towards music, and at that period had taught himself notes and could play fairly well for his age. He used to sit with the organist at the church in Melksham during his holidays, and at Ironbridge he practised on the organ in Coalbrookdale Church. He became organist there in 1877, just before he came to London. He first heard orchestral music in Bath. Here also his mother took him to his first opera. He attended a performance of “Elijah” in Worcester Cathedral in 1872—his first choir and organ performance. Another stimulus towards music was the piano recitals given by Rubinstein at Birmingham in 1875. Here he has said that he heard for the first time the real thing, and in consequence his own music improved enormously.

The hard medical work at Norwood did not lessen his desire for music. He could generally manage to find a little spare time for playing the piano and to go to concerts. He was a frequent visitor to the opera. In later years he became a Fellow of the Royal Philharmonic Society. His figure was well known in the musical world.

He was quite broad-minded in his music, but he had, if anything, a preference for the works of Wagner. He was present at the first performances at Bayreuth, and was a member of the Patronat Verein. He went to almost every festival until about 1895. One instance showing his broad-mindedness was a visit to Stuttgart to hear the first performance of the new opera “Ariadne,” by R. Strauss. Whether he played the works of Beethoven, Brahms, Chopin, Franck, Debussy, Tschaikovsky, Strauss or others, all were rehearsed by Plimmer with equal patience, and in addition their development was carefully studied. For several years he gave recitals of music to his friends in his music room, 3 Hall Road. It was extraordinary for a man so busy in other fields to find the time and to give renderings which were a revelation.

He wrote an analysis of Sinding’s pianoforte quintette, and two articles on the Bayreuth Festival of 1891 in the *Musical News*, and a long article, “A Great Conductor,” in the *Times* of March 18, 1911. He was well acquainted with many of the foremost musicians of his time.

Fine literary gifts were also included in his mentality. During his early life at Ironbridge he read a great deal, in particular the works of Carlyle, Emerson, and Ruskin. At the same time he taught himself German and French, and added enormously to his school-day knowledge of Latin and Greek. He had correspondence with Ruskin, for whom he translated a passage from the German. By Ruskin he is mentioned in “*Fors Clavigera*” “as a young student belonging to the working class,” and he had a letter from Carlyle. He visited Carlyle in his Chelsea home whilst he lived at Norwood. Later he became acquainted with William Morris and visited Kelmscott House. He knew Hubert Herkomer and many other distinguished literary men. He was most intimate with George Meredith, who visited him annually in the earlier years of their friendship. Throughout his busy life literature always occupied part of his time. He collected a large and valuable library. Many of his best

books were secured by chance. He could not and never cared to pay a large price for a book, and was not in the ordinary sense a book collector. His scholarship in literature is only dimly seen in the few articles which he wrote outside his scientific papers. The following are some of these articles :—

“Fourth Dimensions in Space,” Hazell’s Encyclopedia. “Some Aims and Methods in Medicine” (Introductory lecture to medical students at the session 1900–1901), St. Mary’s Hospital Gazette. “Bedullus Immortalis,” Presidential Addresses to the Roy. Micr. Soc., 1911 and 1913. “Omariana,” privately printed for the twenty-first birthday of the Omar Khayyám Club (1913). “The Curves of Life,” Science Progress, 1915. “The Father of Modern Science,” Science Progress, 1916. “Annals of the Royal Society Club,” Science Progress, 1917. “Sir M. A. Ruffer, C.M.G.,” Nature, 1917. “Hyperacoustics,” Science Progress, 1918. “Sir Alfred Keogh and the Army Medical Services,” Nature, 1918.

All other branches of Art were thoroughly appreciated, and he was a connoisseur of the Italian School of painting. Many journeys were planned for the further acquaintance of Architecture and Painting. His first journey abroad was in 1881, to Belgium and to Nuremberg and other parts of Germany. In 1887 he first went to Italy, to Venice, and from 1895 onwards he went almost annually to Italy. Wherever he went his first visit was to the picture gallery, and in these visits he obtained his great knowledge of Fine Art, Sculpture and Architecture.

He delighted in the intercourse with his fellow-men, and was a brilliant conversationalist; he seldom missed those opportunities of meeting his friends and other men that were offered by the Omar Khayyám Club, the Royal Society Club, and the Savile Club. He was President of the Omar Khayyám Club in 1911, and Treasurer of the Royal Society Club from 1914 to 1916. He was one of those mainly concerned in the formation of the Lucretian Club, of which he was Secretary and Treasurer from its foundation in 1910 to 1917.

A friend of his has written—“When one thinks of the fulness of his life, his keen interest in literature, music, art, and all the things that really matter, it is wonderful that he should have found room for them all as he did. He had a nature, in the words of one of the old Greek poets whom he loved—*‘Τετραγώνος, ἀνευ ψόγου τετογμένος’* (‘Foursquare, fashioned without fault’).”

